Abstract Title: Budget Impact Analysis of iGlarLixi for Treatment of T2DM in Algerian Setting

Presenting Author: Mimouni Safia

Abstract Body:

OBJECTIVES: The objective is to assess the budget impact of iGlarLixi introduction in Algeria, in eligible population, over a time horizon of 5 years, from the Algerian health care system's perspective.

METHODS: The budget impact analysis was designed with a 5-years time horizon for patients with T2DM, epidemiology data references were from National office of statistics, Stepwise WHO and IDMPS wave 7, the eligible population considered was: adults with T2DM insufficiently controlled on OAD with HbA1C >7 %, adults with T2DM insufficiently controlled on insulin with HbA1C >9%). The analysis included treatment costs in different treatment regimens, costs of glycemic self-monitoring which are covered by the social security (CNAS or CASNOS), administration costs (not including nurses costs). All costs were reported in Algerian dinars (AD). Deterministic sensitivity analysis was carried out on all relevant costs and parameters included in the budget impact assessment.

RESULTS: The results showed a negative budget impact in the 1st year: -262M AD. Starting from the 2nd year the budget impact starts decreasing significantly and reaches: -475M AD, this is mainly driven by increasing market share of iGlarLixi, the negative impact reaches -1 Mds AD in the fifth year, this is due mainly that iGlarLixi take market share from basal bolus regimens and Premix bi-daly and tri-daily resulting in cost savings as it is a less costly fixed-ratio combination. The cumulative budget over 5 years is (budget impact= -3 Mds AD). Sensitivity analyses determined that the cost of treatment and basal insulin dose had the potential to impact the base case analysis.

CONCLUSIONS: The total budget for the introduction of iGlarLixi in Algeria has a considerable saving on health expenses and on the social security budget (-3Mds AD over 5 years). Therefore, iGlarLixi is a cost-saving alternative.

Tour Guide’s Questions for Starting Q&A (Each poster will have ~5 minutes for Q&A with attendees/Tour Guide)

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# Healthcare Costs of Osteoporotic Fractures in Nigeria

**OBJECTIVES:** Currently, there is limited data available on the economic burdens of osteoporosis-related fractures in developing nations, particularly in sub-Saharan countries. The aim of this study was to investigate the direct healthcare costs for inpatients with osteoporotic (OP) fractures and the factors influencing these costs in Nigeria.

**METHODS:** We examined the medical records system for inpatients (≥50 years-of-age) who received surgical or non-surgical intervention for OP at the National Orthopedic Hospital in Enugu between 2016 and 2020. Data on direct healthcare costs incurred during their hospitalizations were inflation-adjusted and categorized as service, diagnosis, treatment, medical supplies, and pharmaceutical costs. As a control, total medical costs for contemporaneous inpatients with osteoporosis were also collected.

**RESULTS:** A total of 120 OP fracture inpatients and 640 controls were included. The median cost for OP fractures per patient was $758 US dollars, which is 3-fold higher than the cost for inpatients with osteoporosis ($203, \( P < 0.001 \)). The direct cost of medical materials accounted for the largest proportion (29%), followed by pharmaceuticals (25%), treatment (21%), services (19%), and diagnosis (6%). The median number of hospital admissions for OP inpatients was 2 times, with a median length of stay of 28 days. The major factors influencing the health care costs of OP inpatients were: intervention approach ($978 for surgical intervention versus $182 for non-surgical intervention, \( P < 0.001 \)); infection of injury site ($1,112 for infected site versus $455 for non-infected site, \( P < 0.001 \)); and prior traditional bonesetter (TBS) encounter ($284 for those who encountered TBS versus $182 for those who did not encounter TBS, \( P < 0.01 \)).

**CONCLUSIONS:** Medical supplies and pharmaceuticals accounted for more than half of the direct healthcare costs for inpatients with OP fractures. Surgical intervention, an infected injury site, and a previous TBS encounter were factors that directly impacted on the healthcare costs.
Poster Tour Guide Packet

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Acceptance Code: EE609
Board Number: 4A
Abstract Title: The Cost of Beta Thalassemia Major Disease From Patient Perspective in Egypt
Presenting Author: Islam Anan

Abstract Body:

OBJECTIVES: As per the TIF (Thalassemia International Federation) report, Egypt has 10,000 registered thalassemia cases and more than 20,000 non-registered cases where 95% are beta thalassemia major. The Public sector Health Insurance Organization (HIO) covers 7,000 pediatric patients with monthly cost from 1800 EGP to 5000 EGP based on the patient age, however co-payment is still high especially among the adult population. The study aims to calculate the cost of b-thalassemia major among pediatric and adult population in Egypt from patient’s perspective.

METHODS: A randomized sample of 35 patients (Adults and caregivers of pediatrics) from both rural and urban areas completed a self-administered survey through the Egyptian Thalassemia Association, stating direct, indirect medical costs they encounter through their disease journey as well as indirect costs (absenteeism), SPSS was used to analyze the data from survey, and then an excel based cost of illness model was then built to project the results to the population.

RESULTS: Total annual cost of B-Thalassemia in Egypt was calculated to EGP 268,737,528 (14.3 M USD) equivalent to EGP 26,874,974 (7.5 M USD) with the highest cost goes to medication and monitoring costs; EGP 64,028,710 (3.4 M USD) and EGP 28,255,806 (1.5 M USD) respectively. Direct non-medical costs were calculated to be 4% equivalent to EGP 115,831,583 (6.1 M USD) with absenteeism of adult patients and caregivers of pediatrics equivalent to EGP 67,060,390 (3.6 M USD) and EGP 48,771,193 (2.6 M USD) respectively.

CONCLUSIONS: Even with the insurance coverage of the public sector, Thalassemia patients still suffer a high financial burden given the average annual wages in Egypt, especially the adult patients.

Tour Guide’s Questions for Starting Q&A (Each poster will have ~5 minutes for Q&A with attendees/Tour Guide)

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**Acceptance Code:** MT12

**Board Number:** 6A

**Abstract Title:** A Targeted Literature Review on Digital Health Innovation (DHI) in Asia Pacific (APAC) Region

**Presenting Author:** Mahendra Kumar Rai

**Abstract Body:**

OBJECTIVES: DHI is a broad, multidisciplinary concept that applies digital transformation to the healthcare field. We aimed to review the implementation of DHI in APAC region through a targeted literature search.

METHODS: Comprehensive searches were conducted in peer-reviewed publications platforms PubMed and Google scholar to identify the studies assessing digital transformation of healthcare and its implementation. The key search terms used (alone or in combination) included “Digital technology”, “Digital transformation”, “Digital health innovations”, “Health care”, etc. between 2000 and 2022. To compliment the database search results, the searches were expanded to include non-academic articles, conference abstracts, and case reports.

RESULTS: We included 24 studies in total (Australia, n=10; India, n=4; Singapore, China, and Taiwan, n=2 each; Japan, South Korea, Thailand, and Malaysia, n=1 each). Study designs included perspective/point of view report (42%), case study (38%), and web-based survey (20%). Tele-health/smart access devices (63%) were the most common modalities used. Others (37%) included remote patient monitoring, electronic medical records, etc. Psychiatry (35%) was the discipline with most topics being reviewed for digital health, followed by cancer care (21%), diabetes (19%), hypertension (15%), and oral problems (10%). The observations showed that developed markets like Singapore, South Korea, Australia, Taiwan, and Japan are considered advanced markets for DHT because of their governments' progressive approaches towards the use of DHTs. Analyses have shown that APAC digital health market is projected to grow by 34.2% CAGR over the next 5 years (2020-2026). Geriatric health was observed to be the key driver of DHI in the APAC region.

CONCLUSIONS: In APAC countries, there has been a surge in interest in using DHTs mostly focused on mental health and cancer care. However, there is need for more studies to investigate the impact of the use of DHTs/DHI in the improvement of patient outcomes in real-world clinical practice.

**Tour Guide’s Questions for Starting Q&A** (Each poster will have ~5 minutes for Q&A with attendees/Tour Guide)

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